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FIG. 1
MACROSTRUCTURE
A

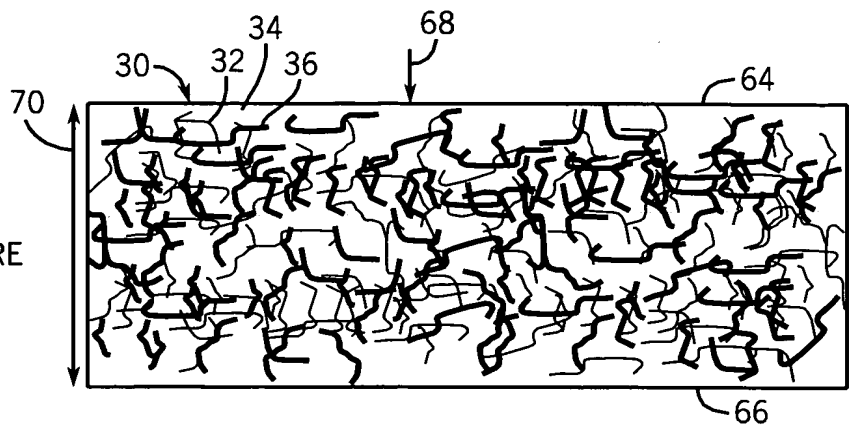


FIG. 2
MACROSTRUCTURE
B

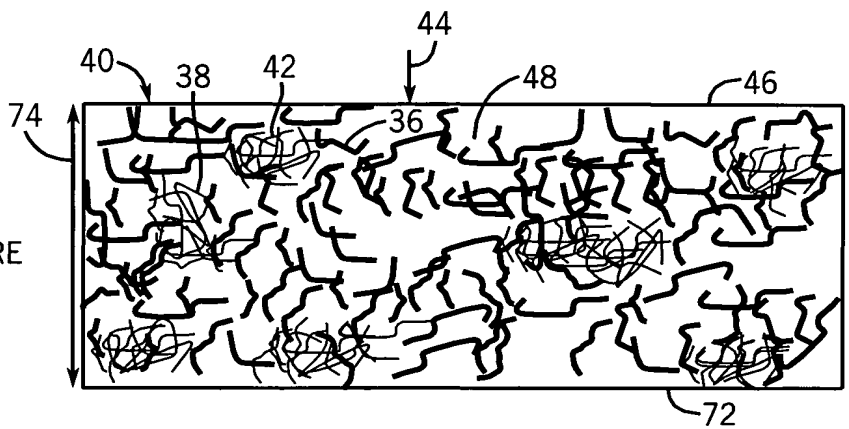
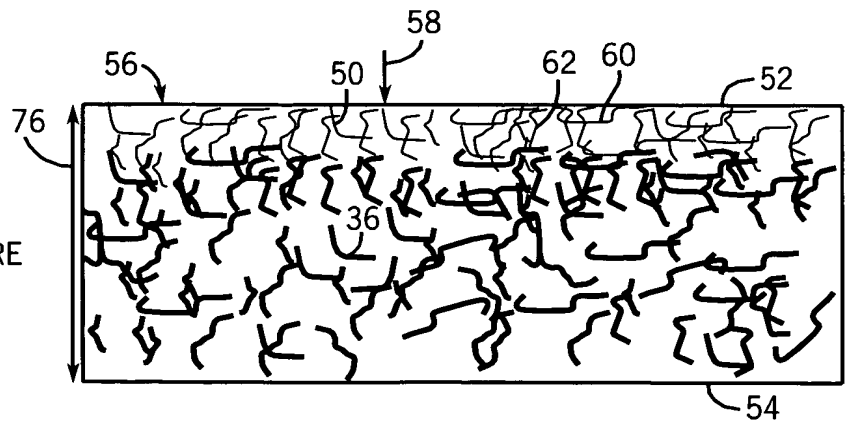


FIG. 3
MACROSTRUCTURE
C



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FIG. 4
MICROSTRUCTURE
1

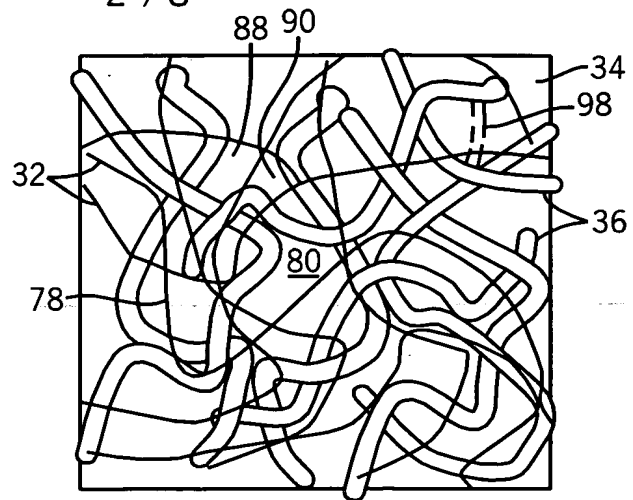


FIG. 5
MICROSTRUCTURE
2

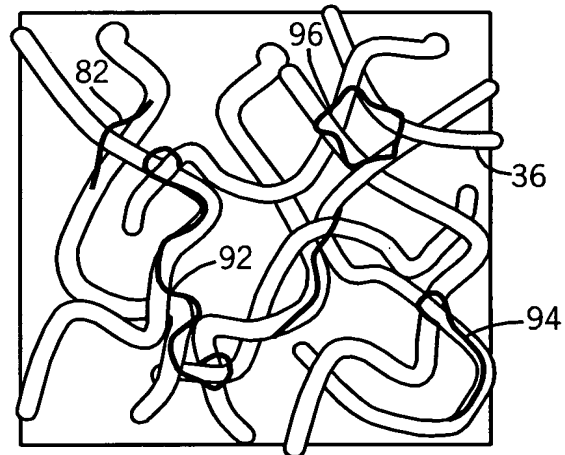
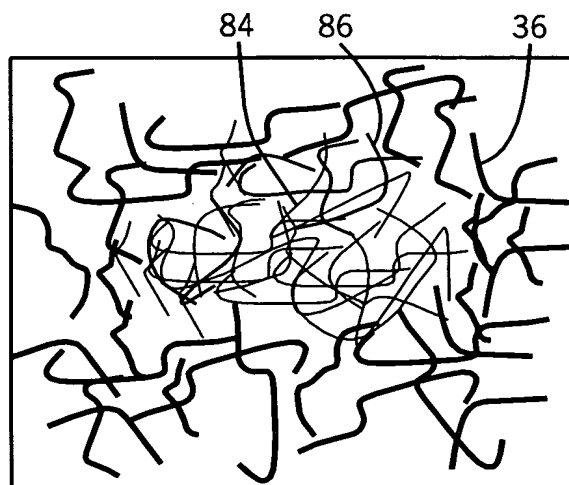


FIG. 6
MICROSTRUCTURE
3



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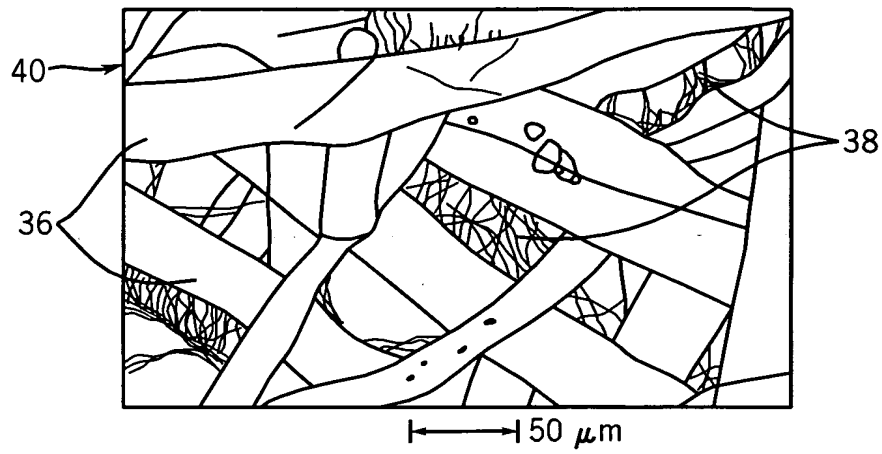


FIG. 7

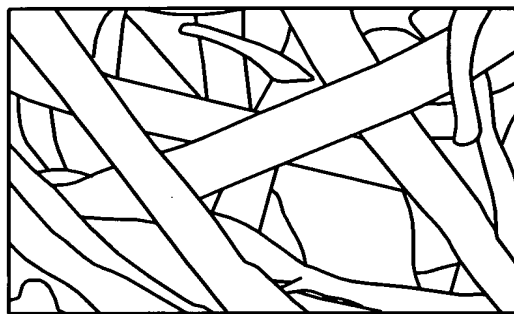


FIG. 9
TEST MEDIA A



FIG. 10
TEST MEDIA C



FIG. 11
TEST MEDIA D

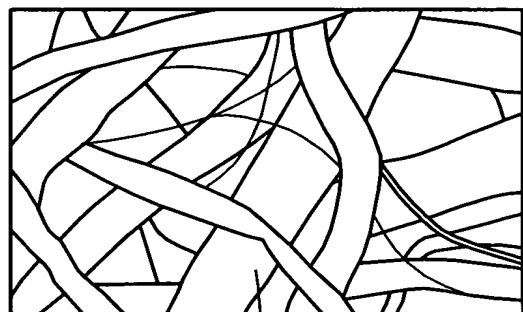


FIG. 12
TEST MEDIA E

TABLE 1. CHARACTERISTICS OF SAMPLE FILTER MEDIA										COMMERCIAL FUEL FILTER-GRADE CELLULOSE CF									
MEDIA		A	B	C	D	E	G	H	I	J	K								
MEDIA RECIPE	UNITS																		
CRESTBROOK BLEACHED NORTHERN PINE PULP	g	4	4	3.5	4	4	5.5	5.5	5.5	5.5	6								
BUCKEYE CELLULOSE HPZ	g	3	2.75	2.5	3	2.75	6	6	5.5	5.5	6								
OTHER		NONE	POLYESTER MELTBLOWN	POLY. MELTB.	ACRYLIC NANOFIBER	706 GLASS	706 GLASS	FIBRILLATED KEVLAR	FIBR. KEY.	POLY. MELTB.	NANOFIBER POLYARAMID								
AMOUNT	g	0.00	0.25	1.00	0.03	0.25	0.50	0.50	1.00	0.80	0.06								
DIAMETER	mm	NA	1400-3300	1400-3300	100-500	800	800	500-4000	500-4000	1400-3300	200-600								
MACROSTRUCTURE		NA	B	B	B	B	A	B	B	B	B								
MICROSTRUCTURE		NA	1	1	1	1	1	1	1	1	2								
PHYSICAL PROPERTIES																			
BASIS WEIGHT	g/m ²	83.71	83.10	79.11		81.48	75.77	127.32	125.66	126.77	130.64								
CALIPER	mm	0.36	0.32	0.33		0.33	0.36	0.64	0.69	0.64	0.64								
FRAZER PERMEABILITY	lpm at 0.5 in. H ₂ O	40.3	27.4	15.2		10.0	12.4	14.5	29.0	19.0	23.0								
MEAN FLOW PORE SIZE	μm	19.5	17.7	12.3		9.5	10.5	12.3	18.5	13.4	16.1								
PARTICLE SIZE (μm)																			
FRACTIONAL EFFICIENCY																			
	0.22 %	14.996	23.496	38.637		43.337	48.708												
	0.28 %	17.249	24.707	43.127		45.867	54.790												
	0.34 %	12.496	23.819	43.927		49.016	54.514												
	0.43 %	18.195	25.127	47.540		53.471	61.539												
	0.52 %	23.007	29.511	48.984		53.328	64.315												
	0.65 %	25.027	37.523	58.792		60.300	72.688												
	0.81 %	27.788	37.880	65.118		67.718	80.582												
	1.00 %	21.209	45.067	71.291		72.142	86.051												
	1.25 %	29.001	44.470	75.180		76.745	88.305												
	1.55 %	38.515	54.229	81.989		82.660	90.714												
	1.91 %	46.390	55.384	80.603		84.540	93.030												
	2.38 %	48.808	63.993	87.978		89.499	95.582												
	2.95 %	58.414	71.177	92.577		92.467	97.164												
	3.64 %	67.462	81.837	96.139		94.443	98.082												
	4.52 %	84.792	89.938	99.047		97.490	99.330												

FIG. 8

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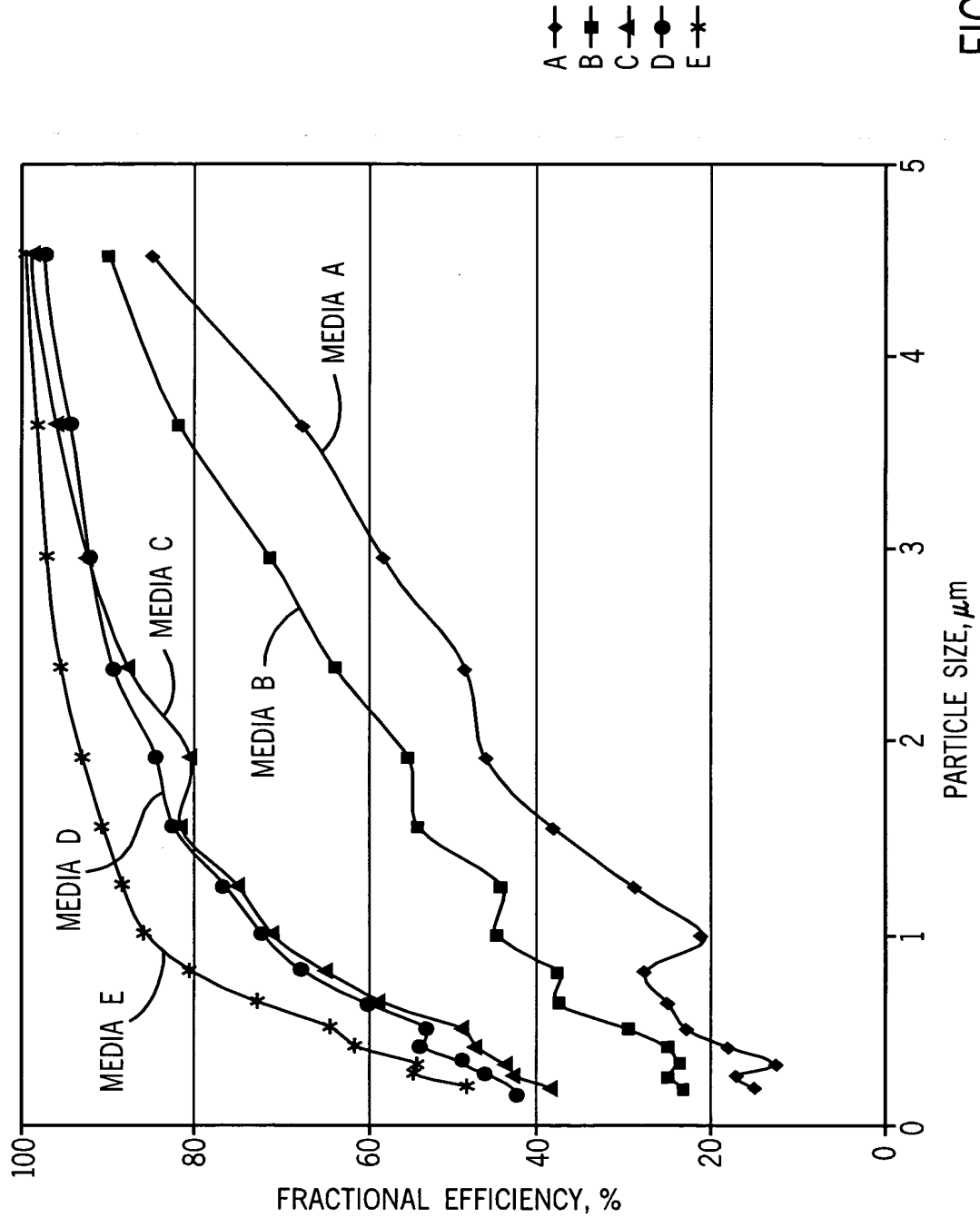
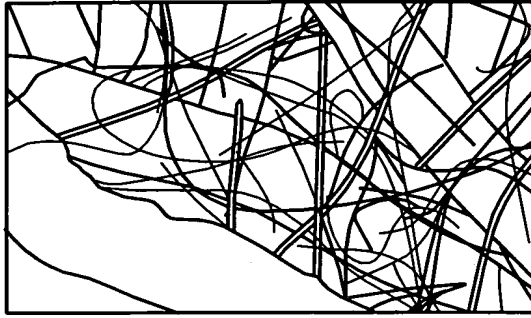


FIG. 13

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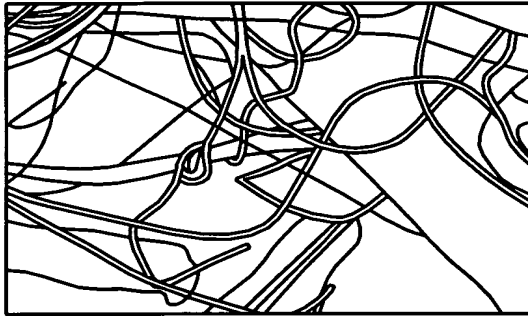
10 μ m

FIG. 14
TEST MEDIA G



10 μ m

FIG. 15
TEST MEDIA I



10 μ m

FIG. 16
TEST MEDIA J



10 μ m

FIG. 17
TEST MEDIA K



10 μ m

FIG. 20
COMMERCIAL FUEL
GRADE CELLULOSE MEDIA CF
PRIOR ART

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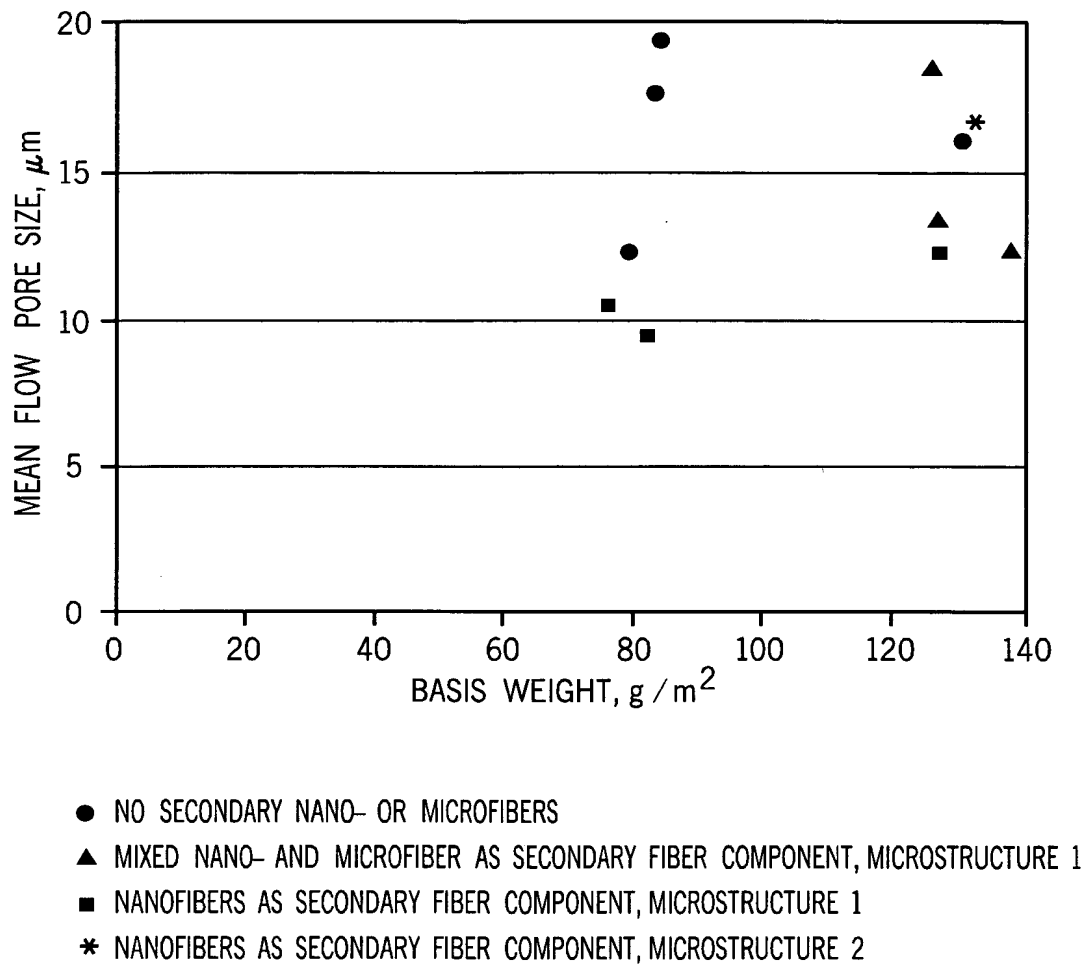


FIG. 18

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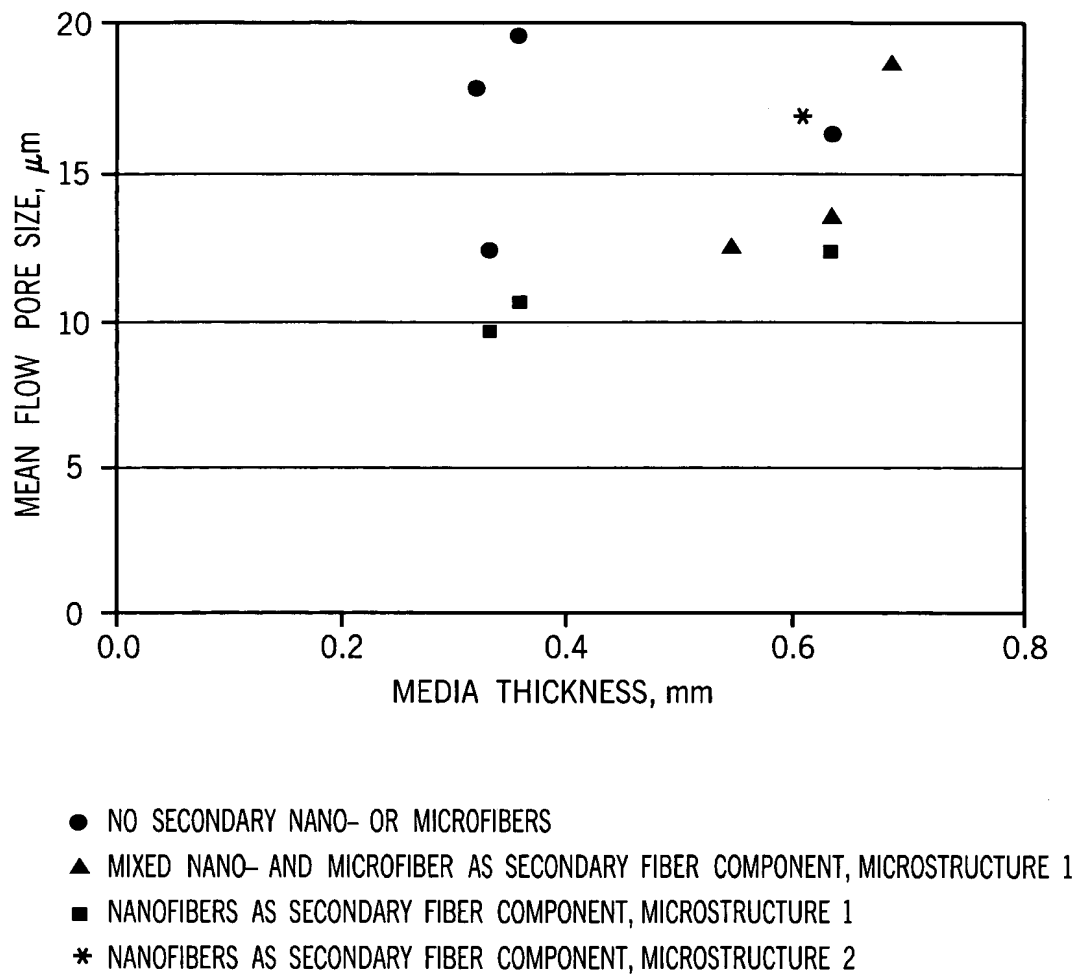


FIG. 19